

WHAT IS CLAIMED IS:

1. A robot apparatus capable of performing autonomous motion based on inner states and/or external stimuli, comprising

expression means having a plurality of expressive units capable of being orthogonally expressed independently of one another;

correlating means for correlating a plurality of orthogonal states, which are based on said inner states and/or external stimuli, with at least one of said expressive units; and

control means for controlling said expression means for representing the plural orthogonal states in parallel, using the correlated expressive units.

2. The robot apparatus according to claim 1 wherein said control means control said expression means using expressive units having parameters variably controlled responsive to each expressive element of said states.

3. The robot apparatus according to claim 1 wherein said expression means includes a light radiating device and wherein the plural expressive units, capable of orthogonal expressions independently of one another, include two or more of color hue, saturation, intensity and patterns of light emission.

4. The robot apparatus according to claim 3 having the appearance simulating an animal, and wherein said light radiating device is provided at a location corresponding to an eye thereof.

5. The robot apparatus according to claim 1 wherein said expressive means is uttering means and wherein the plural expressive units, capable of orthogonal expressions independently of one another, include two or more of the sound pitch,

sound volume and rhythm.

6. The robot apparatus according to claim 1 wherein said correlating means outputs said correlation by control commands different in the priority sequence thereof;

said control means in case of issuance of plural control commands different in the priority sequence thereof prioritizing the control command higher in the priority sequence thereof.

7. A robot apparatus for selecting and executing at least one of a plurality of motions, comprising

expression means having expressive units variably controlled by a parameter;

command issuing means for issuing a control command on motion selection, said control command being such a one in which said expressive units variably controlled by said parameter are correlated with the selected motion; and

control means for controlling said expressive means by said control command;

said control command having a priority sequence;

said control means on issuance of plural control commands different in the priority sequence controlling said expressive means in accordance with the control command higher in the priority sequence.

8. The robot apparatus according to claim 7 wherein, if a control command higher in the priority sequence than a control command controlling the expression means now in operation is issued, said control means discontinues the expressions to control the expression means in accordance with the control command higher in the

priority sequence.

9. The robot apparatus according to claim 8 wherein said control means re-initiates the interrupted expressions at a time point when the expressions under said control command higher in the priority sequence have come to a close.

10. The robot apparatus according to claim 7 wherein said command issuing means is a plurality of behavior stating modules stating the motions of a robot body;

said behavior stating module, when selected, issuing a control command of the priority sequence matched to the motion of the robot body.

11. The robot apparatus according to claim 10 wherein the control command issued by the behavior stating module selected on the basis of a command from outside is higher in the priority sequence than the control command issued by the behavior stating module selected on the basis of the inner state or the state of recognition.

12. The robot apparatus according to claim 7 wherein said expression means include plural orthogonal expressive means.

13. A method for expression by a robot apparatus capable of performing autonomous motions based on inner states and/or external stimuli, said method comprising

a correlating step of correlating a plurality of orthogonal states, which are based on said inner states and/or external stimuli, with at least one of a plurality of expressive units, which are owned by expression means and which are capable of being orthogonally expressed independently of one another; and

a control step of controlling said expression means for representing the plural orthogonal states in parallel, using the correlated expressive units.

14. The method for expression by a robot apparatus according to claim 13 wherein, in said control step, said expression means is controlled by expressive elements the parameters of which are variably controlled responsive to respective expressive elements of said states.

15. The method for expression by a robot apparatus according to claim 13 wherein, in said correlating step, said correlation is output by control commands different in the priority sequence; and wherein

if a plurality of control commands different in the priority sequence are issued in said control step, the control command higher in the priority sequence is prioritized.

16. A method for expression by a robot apparatus in which at least one of a plurality of motions is selected and executed, said method comprising

a command issuing step of issuing, on motion selection, a control command in which an expressive unit variably controlled by a parameter owned by expression means is correlated with the selected motion; and

a control step of controlling said expression means by said control command;

said control command having a priority sequence;

said expression means being controlled in said control step by a control command higher in the priority sequence when a plurality of control commands different in the priority sequence are issued.

17. The method for expression by a robot apparatus according to claim 16 wherein if, in said control step, a control command higher in the priority sequence than the

control command controlling said expression means in the expressing operation is issued, the expression is discontinued and the expression means is controlled by the control command higher in the priority sequence .

18. The method for expression by a robot apparatus according to claim 17 wherein, in said control step, the expressions discontinued is re-initiated at a time point when the expression corresponding to the control command higher in the priority sequence has come to a close.